

APR 18 2007

SYNNESTVEDT & LECHNER LLP  
In re Application of S. A. Baum  
Application No. 10/671,341

Atty. Docket No. P26,015 US1  
Reply to Office Action dated January 18, 2007  
Reply dated April 18, 2007

### REMARKS

#### **Status of Claims**

Claims 46, 47, 49 to 51, 54, 56 to 85 were pending in the present application. Of the pending claims, Claims 57, 59, and 63 to 85 were withdrawn from consideration. Claims 46, 47, 49 to 51, 54, 56, 57, 60, 61, 66 to 73, and 76 to 85 have been amended by this Reply. No new matter has been added by these amendments. Reconsideration is respectfully requested in light of these Amendments and the following Remarks.

#### **Discussion of the §103(a) Rejections**

Claims 46, 47, 49 to 51, 52 to 56, 58, and 60 to 62 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,083,682 to Campbell et al., in view of patent publication WO 97/35198 to Moran et al. as evidenced by Valerio et al.

Claim 46 has been amended to include the phrase -- each solid phase support having an aperture extending therethrough, the rods being extendable through the apertures in the solid phase supports for support of a plurality of solid phase supports at a time --. Such an amendment makes it clear that each of the rods which are a part of the transfer device is capable of holding a plurality of solid phase supports at a time.

Moran et al., as evidenced by Valerio et al., discloses solid phase supports in a shape of a crown. The crown has a void formed by the four prongs of the crown (see, Valerio et al., Fig. 1, and page 3, right-hand column, second paragraph). The crown as taught by Moran et al. and Valerio et al. however does not contain an aperture that extends through the crown. Crowns are snapped onto stems (termed "pins" in Valerio

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et al.), by inserting an end of a stem into the void. Moran et al., as evidenced by Valerio et al., discloses that only a single crown can be placed onto a stem at a time. Moran et al. does not suggest that a plurality of crowns may be carried by one stem. It would thus not be possible to use a crown carrier which comprises a plurality of stems to carry plurality of columns of crowns. The  $8 \times 8$  array format of pins as disclosed in Moran can transfer only 64 crowns at a time.

In the presently claimed invention, each of the solid phase supports has an aperture extending therethrough to allow for the carriage of the solid phase supports on a rod. The presence of the aperture in each of the solid phase supports is material and is different from the void of crowns disclosed in Moran et al., because a rod can be inserted through the solid phase support, but cannot be inserted through the crowns of Moran et al. The crowns of Moran et al. snap onto the pin but do not go through the pin, thus do not allow for a carriage of additional crowns. It is useful for a rod to be inserted through the solid phase support as is claimed in the present application, because a plurality of solid phase supports can be transferred on a single rod. Thus, the support transfer device recited in a part of Claim 46, can transfer a plurality of columns of solid phase supports. An entire X or Y plane of solid phase supports may be transferred by the use of such a support transfer device. Furthermore, a support transfer device as recited in Claim 46 may be comprised of a 2-D array of rods (see the descriptive portion of the specification, page 38, line 24 to page 39, line 2; which correspond to publication 2004/0058391, paragraph [0096], second sentence), thus it is possible to transfer a 3-D array of solid phase supports (see the description, page 39, lines 14 to 15; publication 2004/0058391, paragraph [0097], fifth sentence).

Under the patent examination procedures, the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose. See M.P.E.P. § 2145. Here, in order to arrive at the support transfer apparatus recited in Claim 46, a person skilled in the art would

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have to combine the teachings of secondary reference Moran et al. and with primary reference Campbell et al. Even if the disclosure of placing one crown solid phase support onto one pin could be modified to arrive at placing a plurality of solid phase supports onto single rod, the teaching of Moran et al. would not be combinable with the teaching of Campbell et al., because the combination would be inoperable. Campbell et al. discloses the presence of a membrane between each reaction zone. A removal of such a membrane to accept the introduction of pins/rods into the wells would render the invention of Campbell et al. inoperable. This is because the membrane in Campbell et al. separates the reaction zones, and the membranes act as solid phase supports (see Campbell et al., col. 11, line 65 to col. 12, line 6). In another embodiment of Campbell's apparatus, the reaction vessel (reaction zone) may be separated from another reaction vessel by a frit. See, for example, fig. 4 of Campbell et al. Frits hold the solid supports within the reaction vessel (see Campbell et al., col. 10, lines 31 to 33). This apparatus is not combinable with the disclosure of Moran et al., because here too the combination would be rendered inoperable for similar reasons as stated above.

#### **Discussion of the § 112 Rejections**

On pages 6 to 7 of the Action, the Examiner rejected Claims 46, 47, 49 to 51, 54, 56, 58, 60 to 62 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Claim 46 has been amended to include the phrase --and a mechanism to prevent the support from coming off the rack;-- . The basis for this amendment is found in the specification, page 5, lines 18 to 20, and page 10 lines 3 to 5; publication 2004/0058391, paragraph [0012], second sentence, and paragraph [0047], second sentence. Claim 61 has been amended to describe the mechanism as comprising an end cap. The basis for this amendment is found in the specification, page 39, line 8 to page 39 line 16; publication 2004/0058391, paragraphs [0097] to [0098].

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On pages 7 and 8 of the Action, the Examiner rejected Claims 46, 47, 49 to 51, 54, 56, 58, 60 to 62 under 35 U.S.C. § 112, second paragraph. Claims 46, 47, 49 to 51, 54, 57 and 60 have been amended so that a phrase -- solid phase support -- is used throughout the claims instead of an unmodified term "support". Withdrawn claims 66 to 71, 73, 76 to 81, and 83 to 85 have been amended in a similar fashion.

Reconsideration by the Examiner and withdrawal of the § 112 rejections is requested respectfully.

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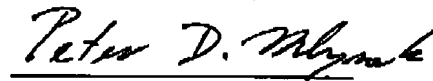
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**CONCLUSION**

In view of the foregoing claim amendments and remarks, the Applicant requests that the claims be allowed. In the event any issues remain outstanding, the Examiner is requested to call the undersigned at the telephone number listed below. The Commissioner is authorized hereby to charge any fees associated with this Reply to Deposit Account No. 19-5425.

Respectfully submitted,

Dated: April 18, 2007



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